ORDIT: Organ Dysfunction in Trauma. A national point prevalence study

Study synopsis

BACKGROUND

Multiple organ dysfunction syndrome (MODS) is a dysfunctional systemic inflammatory response following major tissue trauma. Despite reductions in the reported incidence of MODS over recent years it remains a resource-intensive, morbid and potentially lethal sequelae following serious injury. Registry data now suggests that the onset of MODS has a multimodal distribution with a peak incidence present within the first 48-72 hours following injury and that this early fulminant MODS has the greatest association with mortality. Further, the phenotype of persistent inflammation-immunosuppression catabolism syndrome (PICS) has been described which is characterised by a late, non-resolving MODS lasting more than seven - ten days post injury. The incidence, pattern and severity of MODS following major trauma in the UK have not been evaluated in the modern era of haemostatic resuscitation, damage control surgery and trauma networks. From April 2010 Trauma Systems were introduced in England and Wales, with Scotland predicted to formally implement in 2016. The national system is perfectly positioned to prospectively capture the current epidemiology of MODS for injured patients admitted to UK Major Trauma Centres.

ORDIT AIMS

- Identify the prevalence of MODS in patients admitted to UK critical care units following traumatic injury.
- Investigate the severity and temporal variation of MODS in this cohort of patients.
- Examine the incidence and mode of mortality associated with MODS following traumatic injury.
- Evaluate the relationship between MODS and other clinical outcomes, length of stay and quality of life.

STUDY DESIGN

A one month, prospective point prevalence cohort study of trauma patients (≥16 years) admitted to Major Trauma Centre (MTC) adult critical care units. The primary outcome is to describe the patterns of single and multiple organ failure following trauma (identified using Sequential Organ Failure Assessment [SOFA] scoring). Secondary outcomes include in-hospital mortality, organ support, duration of ventilation and length of stay. No extra data outside of routine care will be collected for the in-hospital phase of the study. Quality of life data (QoL) at 12 months post injury will be collected by the centre for trauma sciences research team.

We hope you will be able to join the ORDIT study group and contribute to this important project.

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